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ECE'S MARK SMART PERFORMS WITH THE CHAMPAIGN-URBANA SYMPHONY

By *Charlie Johnson, ECE ILLINOIS*
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- ECE Electronic Services Technician Mark Smart will be performing the Continuum Fingerboard with the Champaign-Urbana Symphony Orchestra on February 19th.
- The Continuum Fingerboard is a synthesizer like instrument invented by ECE Lecturer Lippold Haken.
- The piece Smart will perform, "Quinquagenarium," is composed by Lippold Haken's brother, Rudolf, who is an Associate Professor of Music at Illinois.

When the Champaign-Urbana Symphony Orchestra celebrates its 50th anniversary on February 19, an atypical instrument will be joining the classical collection of strings, winds, and percussion: the Continuum Fingerboard.

The Continuum Fingerboard, which will be played by ECE Electronic Services Technician, [Mark Wayne Smart](#), is the invention of ECE Lecturer [Lippold Haken](#). With dimensions similar to that of a piano keyboard, the fingerboard creates synthesized sound and can be controlled by the player in three distinct ways. The player controls the instrument's pitch by moving laterally along the keyboard, the volume by pressing harder or softer on the fingerboard's foamy playing surface, and its special effects by moving his or her fingers vertically.



Mark Smart performs on the Continuum Fingerboard during a recent rehearsal of the Champaign-Urbana Symphony Orchestra.

The fingerboard's nearly limitless control system has recently piqued the curiosity of a number of prominent musicians including Led Zeppelin's John Paul Jones, John Williams, and A. R. Rahman, the composer behind the Oscar winning soundtrack for *Slumdog Millionaire*.



Lippold Haken

"You can control the note in three dimensions and three parameters separately and continuously," said Smart. "Lippold has been working on this for about 25 years, and I've been playing it for about five years, so I'm still figuring it out."

Smart got his start on the Continuum Fingerboard largely through his friendship with Haken, another music buff. Their mutual interest in synthesizers dates back to one of ECE's oldest and best known innovations: PLATO.

PLATO was the first computer-based education system, and it was first developed at Illinois in the Computer-Based Education Research Laboratory (CERL).

"I started hanging out at the CERL lab in the mid-eighties when Lippold and Kurt Hebel developed one of the first digital synthesizers for PLATO. I just started going there and playing the synthesizer. Eventually, I started working here," said Smart. Eventually, Smart became a regular recognized player of the fingerboard.

"I always enjoy listening to Mark play the Continuum Fingerboard, whether it's in a smoky bar or on the quad in the middle of winter," says Haken. "I look forward to hearing him with the CUSO at Krannert."

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If Smart's career in ECE and on the fingerboard originated from his friendship with Haken, it's not surprising that his performance with the CU Symphony Orchestra should emerge from a mutual friendship with Haken.

But not Lippold Haken.

In this case, it is Lippold's brother Rudolf, an associate professor of Music at Illinois and the composer of "Quinquagenarium," the piece commemorating the Symphony's 50th anniversary. Rudolf Haken was born and raised in

Champaign-Urbana and conducted the Symphony at the age of 11 when they performed a piece composed by Rudolf entitled "The Animals Which Escaped from the Zoo."

"I've been going to Champaign-Urbana Symphony concerts since I was born, basically. I grew up here. My father taught in Altgeld Hall. Every aspect of this piece has a huge personal meaning to me," said Rudolf Haken.



Rudolf Haken (left) is the composer of "Quinquagenarium," which includes a part of the Continuum Fingerboard, played by ECE's Mark Smart.

Rudolf decided to incorporate his brother's instrument into "Quinquagenarium" (Latin for "50 year old"), to try to add unorthodox sounds to the performance to illustrate the history of the Symphony. Smart will open the piece by performing the sound of a crying infant to illustrate the Symphony's birth and will play "Happy Birthday" with the sounds of the Altgeld Hall chimes. Smart will also play the theme from Beethoven's Emperor Concerto, the Symphony's inaugural performance, and several other tunes and improvisations to punctuate the piece's theme of celebrating the Symphony's birth and growth over the last half century.

"I'm generally interested in removing the barriers that instruments have, and the Continuum really expands the range of music you can make. Anything is really possible with it," said Rudolf Haken. "I wanted to make the piece lively and fun and the continuum helped with that."

Smart and Rudolf Haken will be performing Friday, February 19, at 7:30 in the Foellinger Great Hall at the Krannert Center for the Performing Arts. For more information or for tickets, visit www.cusymphony.org/events_detail.aspx?ID=13.

For more music by Mark Smart or Rudolf Haken, visit www.marksmart.net or www.rudolfhaken.com/.

Information on the Continuum Fingerboard can be found at www.cerlsoundgroup.org/Continuum.

Editor's note: media inquiries should be directed to Tom Moone, communications coordinator, at moone@illinois.edu or (217) 244-9893.

